

OAK RIDGE NATIONAL LABORATORY

OPERATED BY

UNION CARBIDE CORPORATION

NUCLEAR DIVISION



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OAK RIDGE, TENNESSEE 37830

November 13, 1981

Mr. Matthew L. Myers
Division of Advertising Practices
Bureau of Consumer Protection
Federal Trade Commission
414 11th St. N.W.
Rm. 6124
Washington, DC 20580

Dear Mr. Myers:

I have reviewed the information provided by your office concerning the suitability of the current FTC cigarette testing method for determining the tar delivery of the Barclay cigarette relative to that delivered by other name brand cigarettes. Each study for which adequate data has been made available to assess can be challenged on the basis of possible bias introduced by the experimental apparatus required or by the panel selected or on the basis of questionable experimental method. The issue, whether Barclay performs disproportionately different than do other products when comparing FTC methodology and human smoking, may be impossible to resolve with absolute certainty. Current methodologies do not allow an unambiguous measure of human smoking practice.

The crucial point, in my opinion, is the well-illustrated (and generally well-known in the tobacco science community) influence of dilution on tar delivery for "ultra-low tar" cigarettes. Circumventing the dilution mechanism provides a very significant increase in tar delivery. Any air dilution mechanism used with any brand of cigarettes can be circumvented. The Barclay mechanism would seem more readily manipulated than those used on other brands if only because the primary dilution channels cannot be avoided. Blockage by crushing or by contact with the smokers lips would certainly yield a smoke richer in tar than if blockage did not occur.

No unambiguous evidence is presented to prove that blockage does or does not occur. At this stage in my review, however, I find the results of the "butt studies" (by both Philip Morris and Brown and Williamson) to suggest a disproportionate increase in tar delivery by the Barclay comparing FTC and the human smoking experience. As such, I believe the issue raised by the R. J. Reynolds Tobacco Company is worthy of the Commissions attention.

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Additonal visual observation and perhaps ventilation measurements of butts left by smokers of Barclay and other low tar brands would add to the data base. A repeated butt study which incorporates the larger and more unbiased pool of participants as used by Brown and Williamson with measures of rod flow rate and ventilation as used by Philip Morris might also be helpful. The crucial experiment, in my opinion, is one which determines whether channel collapse or blockage occurs unavoidably during normal human smoking. It is not obvious, however, how this can be measured.

I hope that these comments will be of some help to your deliberations.

Sincerely,



Michael R. Guerin, Head
Bio/Organic Analysis Section
Analytical Chemistry Division

MRG:pjm

cc: T. B. Owen

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